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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,671	07/23/2003	Michiei Nakamura	240706US0	6689
22850 7590 03/05/2007 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER CHU, HELEN OK	
			ART UNIT	PAPER NUMBER
			1745	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	03/05/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/05/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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oblonpat@oblon.com  
jgardner@oblon.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/624,671	<b>Applicant(s)</b> NAKAMURA ET AL.	
	<b>Examiner</b> Helen O. Chu	<b>Art Unit</b> 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-5, 8-15 and 22-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-15, 22-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

### **DETAILED ACTION**

1. Applicant's Amendments were received on December 18, 2006. Claims 1, 4, 5, 11-15 are amended. Claims 6, 7, 16-21 are cancelled. Claims 22-26 are new.
2. The text of those sections of Title 35, U.S.C. code not included in this action can be found in the prior Office Action.

### ***Claim Objections***

3. The claim objection is withdrawn because Applicant's have amended the claims.

### ***Claim Rejections - 35 USC § 112***

4. The rejections under 35 U.S.C 112, second paragraph on claims 1, 7, 10, 13, 15 and 20 are withdrawn because Applicants have amended the claims.

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 24-26 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for "the average molecular weight of polymer component (A) to be in a range of 10,000-5,000,000", does not reasonably provide enablement for "the average molecular weight of each (co)polymer in polymer component (A) is 10,000-5,000,000." The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. On page 14, Lines 15-18 of

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Applicant's specification states "the average molecular weight of each (co)polymer in polymer component (A) is 10,000-5,000,000." Appropriate corrections are required.

***Claim Rejections - 35 USC § 102***

7. The rejections under 35 U.S.C 102 (b), on claims 1, 2, 5, 8-15, as anticipated by Ventura et al. are withdrawn because Applicant have amended the claims.

8. The rejections under 35 U.S.C 102 (e), on claims 1-12, 14, 15, as anticipated by Yoshida et al. are withdrawn because Applicant have amended the claims.

***Claim Rejections - 35 USC § 103***

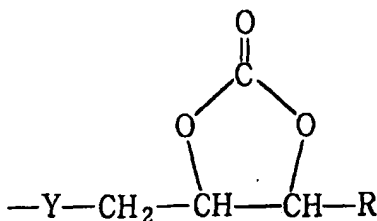
9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-5, 8-15, 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida (US Patent 6,949,317) in view of Figovsky (US Patent 6,120,905).

In regards to claims 1-4, 11, 12, 14, 15, the Yoshida reference teaches a polymer gel (wet) electrolyte includes an electrolyte solution (Abstract) composed of a polyurethane network (Column 9, Lines 60-65), however, does not disclose that the polyurethane compose a (co)polymer made of a component with the following formula:

Formula (1)



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The Figovsky discloses a polyurethane network made with a (co)polymer of formula (1) where R is a hydrogen atom and Y is a carbon backbone or a polyalkyl oxide (Column 5 and 6; Structure I, II). The Figovsky reference further discloses the polyurethane gives better mechanical performance (Column 2, Lines 40-47). Therefore, it would have been obvious to one of ordinary skill to incorporate the polyurethane with structures I and II as disclosed by Figovsky to the Yoshida secondary battery that requires a polyurethane for relative elongated life of the battery.

In regards to claims 5, 22, 23, the Figovsky reference discloses the polyurethane network polymer has non-cross-linked portions and cross-linked portions (Column 16, Lines 30-39).

In regards to claims 8, 9 and 10, the Yoshida et al. reference teaches electrolyte ammonium salts (e.g. lithium perchlorate) (Column 7, Lines 51-56) in a methyl ethyl carbonate solvent (Column 9, Line 11).

In regards to claim 13, the Yoshida et al. reference discloses the electrolyte being retained on a separator made of nonwoven fabrics (Column 30, Lines 1-12)

In regards to claims 24-25, the Yoshida et al. reference discloses polyurethanes have a molecular weight to be 1,000-50,000. It is the Examiner's position that the amounts in question are so close that it is prima facie obvious that one skilled in the art would have expected them to have the same properties *Titanium Metals Corp. v.*

*Banner, 227 USPQ 773*

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It is noted that claims 1-5 are product-by-process claims. Absent a showing to the contrary, it is the examiner's position that the article of the applied prior art is identical to the claimed article. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). Since, the final product structure of Yoshida et al. in view of Figovsky is the same of the Applicant's, Applicant's process is not given patentable weight in this claim.

### ***Response to Arguments***

11. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen O. Chu whose telephone number is (571) 272-5162. The examiner can normally be reached on Monday-Friday 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HOC

  
TRACY DOVE  
PRIMARY EXAMINER  
2/07